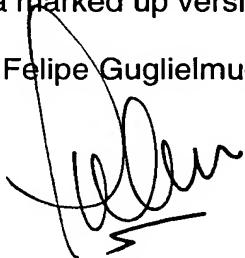


Amendments to the Specification

Please substitute the previous filled specification with the one provided from page 3 to page 19 of this document. Pages 3 to 19 includes a clean version of the substitute specification, a marked up version is included in appendix 1 starting at page 46.

Hereby I, Luis Felipe Guglielmucci declare that the substitute specification includes no new matters.



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MULTICHANNEL MUSIC RECORDS BUSINESS METHOD

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] n/a

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH AND DEVELOPMENT

[0002] n/a

INCORPORATION BY REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISK

[0003] n/a

BACKGROUND OF THE INVENTION

FIELD OF THE INVENTION

[0004] The field for the disclosed invention is the area of "Automated Financial/Management Business Data Processing Method Patents." U.S. Patent Class 705.

DESCRIPTION OF THE RELATED ART INCLUDING INFORMATION DISCLOSED UNDER 37 CFR 1.97 AND 37 CFR 1.98

[0005] The present invention relates to the production and marketing of a new kind of expanded music records. In particular the present invention discloses a business model for sale of a multi-channel record (more of 2 tracks) produced by means of a customized mixing of a master audio multi-track record.

[0006] Recorded Music consumers have two main ways for obtain the product,

purchase a recorded media at a store, physically or virtually and/or download the content from the WEB.

[0007] In any case, the product obtained corresponds to a stereophonic record or a fixed non customized multichannel record with different quality levels, i.e. low quality using encoding and compression algorithms for audio files to be transported through the Internet like MP3, and high quality records on CD media.

[0008] End customers never have access to the master records. Master records obtained in studios (or live) are a collection of multiple sound tracks; in general instruments are recorded individually as well as the voices or special effects.

[0009] Audio studios are able to manage high quantities of different tracks, normal numbers are 32 or 64 tracks.

[0010] Prior to become a sellable product, these tracks are professionally mixed to produce a stereo record, a 2 channel record, left and right or a multichannel record that follows some of the surround standards of the industry, i.e ITU 5.1, ITU 7.1, THX etc. Developed for surround mainly at home theaters.

[0011] In the past the industry has done some attempts to improve the listener experience, an example is the Quadraphonic Approach, which provides 4 channels instead of 2. Quadraphonic records were made and Quadraphonic reproducing equipment sold in small quantities. Other approaches looking for a true surround experience are the already mentioned ITU 5.1, ITU 7.1, THX, binaural methods, and some special fixed multichannel approach like first order Ambisonic (4 channels) or second order Ambisonics (9 channels)..

[0012] The 2 channel approach still prevails as the dominant model mainly because the perceived quality gap in between the mentioned methods is only apparent to a reduced portion of the consumers.

[0013] Recently, 3 to 5 years from now, much more multichannel reproduction equipments are being delivered by the industry, mainly following the improvements in video media like the DVD, the multichannel reproduction is becoming common in the market.

[0014] What the business method disclosed pretends is not to create a only surround sensation, but allow the consumer to emulate the musicians performance at his own place, the goal is that the drums sounds as if the drummer were playing at customer's living room or the singer singing by the customer's pool side, independent of how the customer have listened the same music over the radio.

BRIEF SUMMARY OF THE INVENTION

[0015] The invention is a Business Method for the sale of multichannel music records through the Internet and other distribution channels adapted to the customer's preferences and/or acoustic characteristics of the reproducing environment and/or replay system's setup.

[0016] In one embodiment, the present invention solves the problem of the prior art by providing a way of improve the listener experience making available for the consumers customized multichannel audio records.

[0017] Multichannel audio records will require also multi-channel reproducers systems able to gather, store and reproduce the multichannel records.

[0018] Multi-channel audio records have many advantages in relation to the prior art:

[0019] Allow the end user to specialize the speakers, i.e. speakers for human voice, drums, strings etc.

[0020] Allow directional sound (depending on the speaker arrangements), in example sound coming from the front/behind and/or upper or lower or combinations to enrich the listener's experience.

[0021] Allow the removal of specific music components at listener's discretion.

[0022] Allow the introduction of specific corrections to problems at the reproducing environment.

[0023] This invention consists on a business method to provide the end consumer customized multichannel records to fit and be reproduced in a multichannel custom reproducer system at a specific environment reproducing facility. The invented business method involves the on demand producing of a customized multichannel record taking in account the following characteristics of the customer:

[0024] Enabled channels at the reproducer; the reproducer equipment supports a flexible number of channels that each customer could assign and use in a flexible way that depends on his/her specific music listening requirements.

[0025] Type of speaker attached to each reproducer channel; each output channel at the reproducer equipment could be connected to different type of speakers, in example "Bass specialized speaker", drums speaker or voice speaker.

[0026] Reproducing environment characteristics; reproducing environment could be very different; in example a reproducing environment could be small as a typical living room or big as an auditorium.

[0027] The reproducer equipment may be able to obtain an acoustic profile of the reproducer environment that may be taken in account at the moment of produce the multichannel record on demand.

[0028] Speakers' distribution; the speakers distribution may be taken in account at the moment of produce the multichannel record on demand according the customer preferences.

[0029] Related media and data requested by the customer; together with the audio record also in the customization process other data may be added according the customer preferences, examples of the related media or data that could be included are; music notation for specific instruments, video records, lyrics, lights control data, etc.

[0030] The multichannel record produced on demand taking in account all the particularities of the customer reproducer equipment, environment and preferences is denominated CMRF, "Customized Multichannel Recording File".

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

[0031] FIG. 1 presents a comparison between the prior art and the invented business method.

[0032] FIG. 2 depicts the invented Business Method generic process.

[0033] FIG. 3 presents the invented business method embodiment block diagram.

[0034] FIG. 4 presents example 1 of the application of the disclosed business method

[0035] FIG. 5 presents example 2 of the application of the disclosed business method

[0036] FIG. 6 presents example 3 of the application of the disclosed business method

[0037] FIG. 7 Presents a non-exhaustive list of customization parameters.

[0038] FIG. 8 Presents generic multichannel reproducing equipment.

DETAILED DESCRIPTION OF THE INVENTION

PREFERRED EMBODIMENT

[0039] The business process related to the invented method is shown in fig 2. Fig 3. Shows one of the embodiments that support the invented business method using Internet as the distribution channel.

[0040] The description of the embodiments components selected for the explanation is:

[0041] (1) Customer; is any individual or enterprise that buy music records.

[0042] (2) Music & Content creators and providers; are the ones that generates the content in the form of music records to be sold by the vendor.

[0043] (3) Resellers; are secondary sellers in the value chain that act as distributors for the reproducers equipment and/or the CMRFs.

[0044] (4) Payment processors; are banks or credit card managers or other external organizations that validate money transactions and process the payments.

[0045] (5) Internet; is the WWW that allow data transactions in between the consumers and the vendors.

[0046] (6) Vendor WEB interface; is the vendor transactional web portal.

[0047] (7) Customer validation processor; is the functional block that perform the customer sing in, authentication, authorization and provides/gather information to/from the other software blocks specially for payment transactions.

[0048] (8) Multichannel Mixing device; is the functional block that performs the mixing of the channels of the master record contained in the Master record database (12) to produce a CMRF.

[0049] (9) Acoustic foot print processor; is the functional block that process the acoustic data obtained from the reproducer device of the consumer.

[0050] (10) Multimedia footprint processor; is the functional block that adds to the CMFR the complements required by the consumer.

[0051] (11) Transaction processor; this functional block provides the communication protocols and support the transaction that the method requires.

[0052] (12) Master Record Database; this database holds the master records from which are produced the CMRFs.

[0053] (13) Customer Acoustic Profile Database; this database keeps record of the characteristics of the reproducer equipments of the customer that have purchase CMFR at the system with the purpose of simplify the process of clients requests afterwards.

[0054] (14) Customer Database; this database keeps record of the data of the of the customer that have purchase CMFR at the system with the purpose of simplify the process of clients requests afterwards.

[0055] (15) Consumer Internet Access device; in general is a PC connected to the Internet with standard browsing capabilities.

[0056] (16) Reproducer equipment; this equipment is located at the customer side, is described detail in figure 8 and has the capabilities of download and reproduce CMRFs.

[0057] (17) Reproducer Environment; is the physical space in which the CMRF will be reproduced.

[0058] (18) Speakers; in the basic component of the speakers array supported by the reproducers equipment.

[0059] The way in which the embodiment support the invented method are described as follows:

[0060] The customer (1) through and access device, in general a personal computer connected to the Internet (15) access the Vendor Web interface (6). This is step (A) in the business method description.

[0061] The customer then interacts at the vendor's WEB site following a normal Internet browse, selection and purchase process. This is step (B) in the business method description.

[0062] Once the customer decides to purchase a CMRF:

[0063] The customer is authenticated and authorized by the customer validation processor (7) in conjunction with the Customer database (14).

[0064] A payment transaction is executed by the transaction processor (11) with the payment processors (4).

[0065] Once the payment is authorized, the transaction processor access the Customer Data base (14) ,the Customer Acoustic profile database (13) and through the Internet the customer reproducer equipment (16), with this data in conjunction with the data provided by the customer through the interaction with the vendor Web Interface (8) the transaction processor (11) instructs the multimedia footprint processor (10) and the acoustic footprint processor (9) to generate the parameters to produce a CMRF. Please refer to fig.7 for a non-exhaustive list of customization parameters.

[0066] The acoustic foot print processor (9) receives the data from transaction processor (11) and executes a process to determine the “mixing parameters” that will be used by the Multichannel mixing device (8) to produce the CMFR.

[0067] The multimedia foot print processor (10) receives the data from transaction processor (11) and execute a process to determine which other media or data needs to be gathered from the master record data base (12) to fulfill the customer requirement, then goes to the Master record Data base (12) gathers the information process it and produces a complementary file to the CMFR.

[0068] The multichannel mixing device (8) receives the mixing parameters from the acoustic foot print processor (9) gathers the master multi-channel record files from the Master record data base (12) and mixed it into a CMRF applying volume, phase, tone, filters, distortion and additions, escalation or subtraction to each individual channel to be mixed.

[0069] Once the CMRF is produced by the multi-channel mixing device is combined with the complementary file created by the multimedia footprint processor (10) and then sent to the transaction processor (11) for its deliver to the customer.

[0070] The transaction processor (11) delivers the file through the WEB interface (6) to the customer (1).

[0071] The transaction processor generates update transaction towards the vendor databases (12; 13 and 14) and towards the Music and content providers (2); payment processors (4) and resellers (3).

[0072] The process described could have many variations depending on the resellers' role or the content providers' role or because of different embodiments, but what remain the same and differentiates the invented business method is the customization and deliver of a multichannel record.

[0073] To further illustrate how the business method invented improves the prior art the following examples are presented:

[0074] Example 1: Customer is a jazz fan

[0075] The example assumes that the customer is a regular customer that has done purchases of CMRF before.

[0076] The Reproducer equipment and the reproducer environment as well as the master record source are explained in figure 4.

[0077] In this case the customer obtain a CFMR that emulates the small jazz quartet as if they were playing only for him at his living room, trumpet is clear located at the center, the drums at the left and the guitar an piano to the right.

[0078] With the prior art the customer will not be able to simulate the jazz quartet in the same way and only could locate itself in a convenient listening position.

[0079] Variations on example 1;if the customer plays trumpet, then he could order a CMFR in which trumpet could be muted, so the customer could play its own instrument using the CMFR as a playback.

[0080] Example 2: Customer is an Opera fan

[0081] The example assumes that the customer is a regular customer that has done purchases of CMRF before.

[0082] The Reproducer equipment and the reproducer environment as well as the master record source are explained in figure 5

[0083] In this case the customer obtains a CFMR that emulates a complete orchestra plus very individual voices of the operas singers.

[0084] CMFR emulation is no as direct as was in example 1 because of the very different characteristics of the theater and the reproducer environment. The invented business method offers many advantages over the prior art in this case, over the sound distribution and the directional sound, the followings are direct improvements over the prior art:

[0085] Dynamic Range; because the CMFR is a multichannel record, a very delicate sound as a soprano solo could be allocate in individual tracks with a very good signal to noise ratio while orchestra peaks could be allocate in other channels. In the prior art everything is mixed and limited to the dynamic range allowed by the media with the result that orchestra peaks are attenuated and solos amplified impairing the emotions perception.

[0086] Directionality: Singers, by means of the channel allocation can be easily allocated at some virtual point of the scenario, even the customer could select to be in the action in which case the sound could surround him.

[0087] Associated Data: the CFMR could allow the synchronization with a DVD file.

[0088] With the prior art the customer will not be able to increase the details perceptions at the level offered by the CMFR reproduction.

[0089] Variations on example 2:

[0090] The customer could order at a different price a different diva for the main passages of the opera.

[0091] Example 3: Customer is a Metal Rock fan looking for music for a party

[0092] The example assumes that the customer is not a regular customer and has recently purchased a CMFR reproduction system to be used at a party at the community event center.

[0093] The Reproducer equipment and the reproducer environment as well as the master record source are explained in figure 6.

[0094] In this case the customer has to sign up at the vendor's site and provide the information to establish a link between the vendor site and the reproducer equipment.

[0095] Once the link is established the vendor site request the reproducer equipment to inform back its set up and configuration and to perform an acoustic profile of the reproducer's environment.

[0096] Once the reproducer's configuration and the reproducing environment characteristic are stored in the data base the customer selects the purchase of a group of records to be played at a party. In this case the customer obtains a series of CFMRs that emulates a Metal group playing at the event center at live.

[0097] The emulation is based on allocating the drums at the center while guitar and bass are at the sides, voice is distributed. Live sound is emulated using equalization.

[0098] Variations on example 3:

[0099] The customer could select and option to mute the guitar and allow the customer to play the guitar.

[0100] Innovations in the disclosed Business Method

[0101] The innovations proposed are briefly explained in FIG. 1 "Business method comparison". In the proposed model, the product is different, is comprised of a variable number of soundtracks adjusted according to the customer's profile. The product has been created based on an interaction between the seller and the customer where the customer has provided preferences and/or his reproduction system's characteristics and/or the acoustic characteristics of the reproducing environment to generate the product.

[0102] FIG. 2 describes the Business Model Process, specifying the transactions occurred when an interaction between customer and seller takes place. The interaction starts with the customer's purchase of a music record, then is required by the seller to provide his preferences and/or the characteristics of his reproduction system and/or the characteristics of his listening environment. The seller generates a Customized MultiChannel Record File (CMRF) and proceeds with the sale.

[0103] Invention Benefits

[0104] The present business model invention has the following advantages over prior art methods.

[0105] The present invention enhances the consumer experience while purchasing recording music because allow the customer to:

[0106] Personalize the product within the range authorized by the seller according his/her preferences.

[0107] Interact and explore choices while purchasing recorded music, this enhances the purchasing experience and add value to the product.

[0108] The present invention enhances the listening experience of recorded music because it enables:

[0109] Multichannel sound, this increase the perception of richness and profundity of the sound.

[0110] More user control, the user could act to tune or modify the sound reproduction characteristics (Bass, treble, volume, etc) over each channel what involves more the user creating a sense of ownership, therefore increasing the perceived value.

[0111] Depending on the characteristics of the reproducer equipment , please refer to FIG 8, the customer could also improve the reproduction fidelity by add specialized speakers arrangements.

[0112] The present Inventions enhances also the seller product and service by means of increase the richness and extension of the product, examples of this extensions are:

[0113] Sale/Purchase the rights to a limited or unlimited system profile adaptations according customers' reproduction system improvements.

[0114] Sale/Purchase a package of music to be used once at a party or event.

[0115] Sale/Purchase versions for Karaoke of voices or "Instruments" (authors could include music notation and tips for difficult passages).

[0116] Sale/Purchase limited amount version's rights, keeping at the seller's site a key file to be played on-line to obtain a coherent reproduction.

[0117] Sale/Purchase different quality levels.

[0118] Sale/Purchase versions for different devices (cellular phones, PDAs, car audio systems, etc.), derived from the customer edited CMRF.

[0119] The invention allows sellers to control the original master records, and users to keep customized copies. The proposal allows new customers' interactions (i.e. customers can propose his own version for certain channels of the recording) and new ways to increase his or her loyalty and the product's life cycle.

[0120] The business method disclosed also enhances the barriers for pirate distribution of material protected under copyright , as customer's preferences, reproducer systems and environmental acoustic characteristics generates unique CMRFs, the invention hinders piracy by:

[0121] Increase the technical barriers to produce the copies, this is because the CMFR is customized and could be reproduced at the expected level of quality only at

the reproducer equipment and environment for which it was originally created.

- [0122] Offering quality versions differentiated from unauthorized copies.
- [0123] Limiting the access to the original records.
- [0124] Sharper price discrimination through quality levels, according purchaser's willingness to pay.
- [0125] Increasing customer interaction and loyalty.
- [0126] Similar Business Model or Supporting Technologies in the Market
- [0127] Up to my current knowledge the audio reproducing technologies that could have some similarities with the ones required to support CMRFs are DTS, Digital sound system developed by Lucas Art and focused on movie sound reproduction at the cinema and THX with similar scope and other surround techniques like ITU 5.1, ITU 7.1 etc. No one of these systems consider a customizing interaction and/or the creation of multiple different versions for multiple different customers requirements.
- [0128] The main similarities arises from the fact that this systems looks for improve the customer experience.